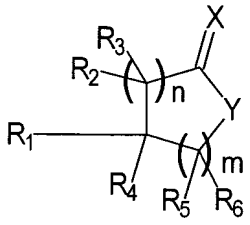
5. [(Amended)] The radiation curable composition according to claim 1, wherein one or more components are present that are chosen from the group consisting of lactones (C1) according to the formula (1):

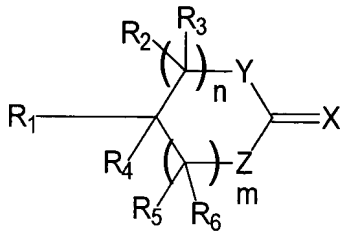


(1)

B2 cont

wherein R_1 = organic group with a molecular weight between 40 and 20000; R_2,R_3,R_4,R_5,R_6 and R_7 are independently of each other H, an alkyl group having 1-20 C atoms, wherein the alkylgroup can be linear, branched or cyclic and may contain heteroatoms like =N, O, S and P; X is an oxygen or sulfur atom; Y is an oxygen or sulfur atom or an NR_7-group; n is 0-4; m is 0-4 and n+m =1-4;

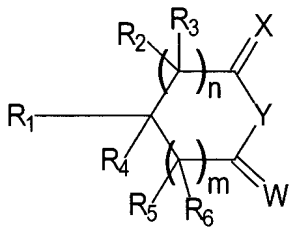
or cyclic carbonates (C2) according to formula (2):



(2)

wherein R_1 = organic group with a molecular weight between 40 and 20000; R_2,R_3,R_4,R_5, $R_6$and R_7 are independently of each other H, an alkyl group having 1-20 C atoms, wherein the alkylgroup can be linear, branched or cyclic and may contain heteroatoms like =N, O, S and P or an arylgroup having from 6-20 C-atoms; X is an oxygen or sulfur atom; Y and Z are independently an oxygen or sulfur atom or an NR_7-group; n is 0-4; m is 0-4 and n+m = 1-4, but excluding the compound wherein n = 1,m = 0, R_2, R_3, R_4 = H and R_1=$CH_2CHCO_2CH_2$ or R_1=$CH_2CCH_3CO_2CH_2$,

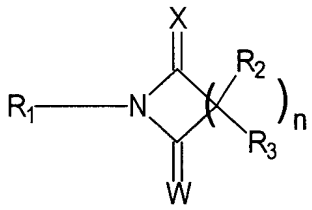
or compounds (C3) according to the formula (3):



(3)

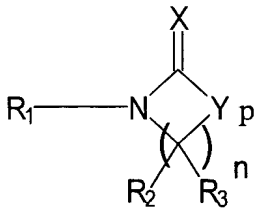
B2 cont

wherein R_1 = organic group with a molecular weight between 40 and 20000; R_2,R_3,R_4,R_5, R_6 and R_7 are independently of each other H, an alkyl group having 1-20 C atoms, wherein the alkylgroup can be linear, branched or cyclic and may contain heteroatoms like =N, O, S and P or an arylgroup having from 6-20 C-atoms; X and W are independently an oxygen or sulfur atom; Y is an oxygen or sulfur atom or an NR_7-group; n is 0-4; m is 0-4 and n+m =1-4;
or a compound (C4) according to the formula (4):



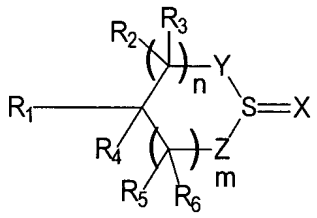
(4)

wherein R_1 = organic group with a molecular weight between 40 and 20000; R_2, and R_3, are independently of each other H, an alkyl group having 1-20 C atoms, wherein the alkylgroup can be linear, branched or cyclic and may contain heteroatoms like =N, O, S and P or an arylgroup having from 6-20 C-atoms; X and W are independently an oxygen or sulfur atom; n is 1-4;
or a compound (C5) according to the formula (5):



(5)

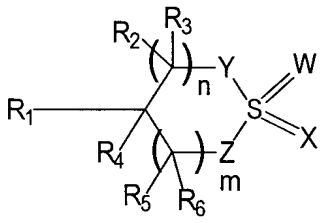
wherein R_1 = organic group with a molecular weight between 40 and 20000; R_2, and R_3 are independently of each other H, an alkyl group having 1-20 C atoms, wherein the alkylgroup can be linear, branched or cyclic and may contain heteroatoms like =N, O, S and P or an arylgroup having from 6-20 C-atoms; X is an oxygen or sulfur atom; Y is an oxygen or sulfur atom or an NR_7-group; n is 1-5; p = 0, 1; but excluding a compound wherein R_1=$CH_2CHCO_2CH_2CH_2$ or R1=$CH_2CCH_3CO_2CH_2CH_2$ with n=2, 3 and X = Y = oxygen, or a compound (C6) according to the formula (6):



(6)

BJ cont

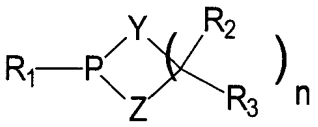
wherein R_1 = organic group with a molecular weight between 40 and 20000; R_2,R_3,R_4,R_5, R_6 and R_7 are independently of each other H, an alkyl group having 1-20 C atoms, wherein the alkylgroup can be linear, branched or cyclic and may contain heteroatoms like =N, O, S and P or an arylgroup having from 6-20 C-atoms; X is an oxygen or sulfur atom; Y and Z are independently an oxygen or sulfur atom or an NR_7-group; n is 0-4; m is 0-4 and n+m = 1-4, or a compound (C7) according to the formula (7):



(7)

wherein R_1 = organic group with a molecular weight between 40 and 20000; R_2,R_3,R_4,R_5, R_6 and R_7 are independently of each other H, an alkyl group having 1-20 C atoms, wherein the alkylgroup can be linear, branched or cyclic and may contain heteroatoms like =N, O, S and P or an arylgroup having from 6-20 C-atoms; W, X, Y and Z are independently an oxygen or sulfur atom or an NR_7-group with the proviso that W and X are not both an NR_7-group at the same time; n is 1-4;

or a compound (C8) according to the formula (8):

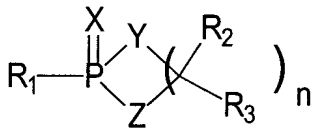


(8)

wherein R_1 = organic group with a molecular weight between 40 and 20000; R_2,R_3, and R_7 are independently of each other H, an alkyl group having 1-20 C atoms, wherein the alkylgroup can be linear, branched or cyclic and may contain heteroatoms like =N, O, S and P or an arylgroup having from 6-20 C-atoms; X is an oxygen or sulfur atom; Y and Z are independently an oxygen or sulfur atom or an NR_7-group; n is 1-4;

B2

or a compound (C9) according to the formula (9):



(9)

wherein R_1 = organic group with a molecular weight between 40 and 20000; R_2,R_3, and R_7 are independently of each other H, an alkyl group having 1-20 C atoms, wherein the alkylgroup can be linear, branched or cyclic and may contain heteroatoms like =N, O, S and P or an arylgroup having from 6-20 C-atoms; X is an oxygen or sulfur atom; Y is an oxygen or sulfur atom or an NR_7-group; n is 1-4.

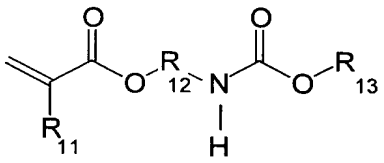
B3

7 [(Amended)] The radiation curable composition according to claim 6, wherein the radiation curable oligomer (A) or diluent (B) comprises a NH- or OH-group.

8 [(Amended)] The radiation curable composition according to claim 1, wherein the component that contains a functional group also has a radiation curable functional group selected from the group consisting of methacrylate, acrylate, vinylether, fumarate, maleate, itaconate, oxolane or epoxy group.

B4

11 [(Amended)] The radiation curable composition according to claim 1, wherein a radiation curable diluent is present, which is a compound according to the formula (10):

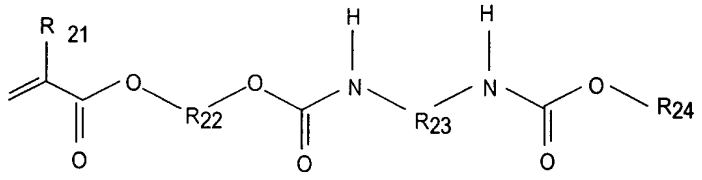


(10)

wherein R_{11}= H or Me, R_{12} = organic group having 1-20 C-atoms and R_{13} is a heterocyclic group of which the corresponding alcohol has a calculated Boltzmann average dipole moment of > 2.5 Debye.

By cont

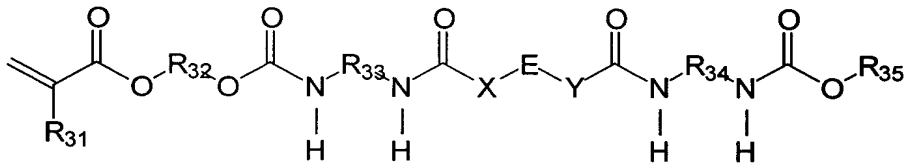
12. [(Amended)] The radiation curable composition according to claim 1, wherein a radiation curable diluent is present, which is a compound according to the formula (11):



(11)

wherein R_{21}= H or Me, R_{22} = organic group having 1-20 C-atoms, R_{23} = organic group having 1-20 C atoms and R_{24} is a heterocyclic group of which the corresponding alcohol has a calculated Boltzmann average dipole moment of > 2.5 Debye.

13. [(Amended)] The radiation curable composition according to claim 1, wherein a radiation curable component is present according to the formula (12):



(12)

wherein R_{31}= H or Me, R_{32} , R_{33} and R_{34} = are independently an organic group having 1-20 C atoms, E oligomer or polymer with a molecular weight between 100 and 100000, X and Y are

B4 independently oxygen, sulphur or a NR_7-group, and R_{35} is a heterocyclic group of which the corresponding alcohol has a calculated Boltzmann average dipolemoment of > 2.5 Debye.

15. [(Amended)] The radiation curable composition according to claim 1, wherein the component that contains a functional group which, when attached to an acrylate group, has a B5 calculated Boltzmann average dipole moment of greater than 3.5 Debye or the component containing a heterocyclic group of which the corresponding alcohol has a calculated Boltzmann average dipole moment of greater than 2.5 Debye is present in an amount of at least about 3 wt.% relative to the total amount of components in the composition.

17. [(Amended)] A process for preparation of the radiation curable compounds as defined in claim 5, by reacting together

B6 (i) an hydroxy-, thiol- or NH-functional (meth)acrylate,

(ii) a di-or more functional isocyanate, and

(iii) an hydroxy-, thiol- or NH-functional compound having a calculated Boltzmann average dipole moment of greater than 2.5 Debye.

18. [(Amended)] A process for preparation of the radiation curable monomers as defined in claim 5, by reacting together

(i) an hydroxy functional (meth)acrylate,

(ii) a di-functional isocyanate, and

(iii) a hydroxy functional compound having a calculated Boltzmann average dipole moment of greater than 2.5 Debye.

19. [(Amended)] A process for preparation of the radiation curable monomers according to claim 5, by reacting together

(i) one equivalent of an hydroxy functional (meth)acrylate,

(ii) two equivalents of a di-functional isocyanate,

(iii) one equivalent of a diamine, dihydroxy or dithiol functional compound with a molecular weigth Mn of 1000 or less, and

(iv) one equivalent of an hydroxy functional compound having a calculated

Boltzmann average dipole moment of greater than 2.5 Debye.

20. [(Amended)] A process for preparation of the radiation curable oligomer according to claim 5, by reacting together

(i) one equivalent of an hydroxy functional (meth)acrylate,

(ii) two equivalents of a di-functional isocyanate,

(iii) one equivalent of a diamine, dihydroxy or dithiol functional compound with a molecular weigth Mn of greater than 1000, and

(iv) one equivalent of an hydroxy functional compound having a calculated Boltzmann average dipole moment of greater than 2.5 Debye.

21. [(Amended)] A process for preparation of the radiation curable oligomer according to claim 5, by reacting

(i) an hydroxy functional (meth)acrylate,

(ii) a tri-or more functional isocyanate,

(iii) an hydroxy functional compound having a calculated Boltzmann average dipole moment of greater than 2.5 Debye together, and

(iv) an hydroxy or amine functional oligomer with an average hydroxy or amine functionality greater than 1.5.

22. [(Amended)] Use of radiation curable compositions as defined in claim 1 in coatings, adhesives, inks.

24. [(Amended)] Use of the radiation curable composition as defined in claim 1 for coating of glass fibers.

31. [(Amended)] A radiation curable composition according to claim 36, wherein the composition comprises at least 3 wt% relative to the total amount of components in the composition of at least one of the components selected from a component that contains a functional group which, when attached to an acrylate group, has a calculated Boltzmann average dipole moment of greater than 3.5 Debye or a component that contains a heterocyclic

group of which the corresponding alcohol has a calculated Boltzmann average dipole moment of greater than 2.5 Debye.

B8

33 [(Amended)] Coated optical fiber comprising a glass optical fiber, a primary coating applied thereon, a secondary coating applied on the primary coating and optionally an ink composition applied on the secondary coating, wherein at least one of the primary coating, secondary coating or ink composition is a radiation curable composition according to claim 1.

B9

34 [(Amended)] Optical fiber ribbon comprising a plurality of coated, and optionally colored optical fibers arranged in a plane and embedded in a matrix composition, wherein the coated optical fiber is a fiber according to claim 32.